CLAIMS

The invention claimed is:

1. A platform for supporting an occupant, said platform comprising:

a chassis whereto a mattress is attached; and

a guide mechanism movably supported by said chassis, the mattress having an undulation formed by routing the mattress through said guide mechanism, the undulation continuously-movable relative to said chassis in concert with said quide mechanism.

2. The platform of claim 1 further including at least one tensioner attached to said chassis and coupled with the mattress.

3. The platform of claim 1 further comprising a carrier movably mounted on said chassis and movable relative to the mattress supported by said carrier.

4. The platform of claim 3 wherein said carrier includes a plurality of bearing elements and a drive train, said plurality of bearing elements mounted to said drive train, said guide mechanism attached to said drive train.

5. The platform of claim 4 wherein said guide mechanism comprises a plurality of guides.

6. The platform of claim 5 wherein said drive train is operatively coupled with each of said plurality of guides.

7. The platform of clam 5 wherein at least two of said plurality of guides have a continuously-variable gap therebetween, the undulation having a continuously-variable span responsive to said continuously-variable gap.

8. The platform of claim 7 wherein said guide mechanism includes at least one collector and at least one dispenser, said at least one collector and said at least one dispenser responsive to the movement of said guide mechanism relative to said chassis, said at least one dispenser releasably coupled with at least one first stratum to be installed between the mattress and the occupant, said at least one collector receivably coupled with at least one second stratum located between the mattress and the occupant, the first and the second strata removably attached to said chassis.

9. The platform of claim 8 wherein, with the weight of the occupant on the mattress, said at least one dispenser is capable of installing the first stratum and said at least one collector is capable of removing the second stratum substantially without moving the occupant and substantially without frictional movement of the first and the second strata relative to the occupant.

10. The platform of claim 1 further including a monitoring device disposed in the undulation.

11. The platform of claim 10 further including a computer network coupled with said monitoring device.

12. The platform of claim 1 further including a therapeutic device disposed in the undulation.

13. The platform of claim 1 further including a facility disposed in the undulation.

14. The platform of claim 1 further including a sanitation tray disposed in the undulation.

15. The platform of claim 14 further including brushes disposed in the undulation above said sanitation tray.

16. The platform of claim 1 wherein said chassis further includes at least one tilt mechanism.

17. The platform of claim 1 further including an automated control system.

18. The platform of claim 17 further including a computer network coupled to said automated control system.

19. A bed for supporting an occupant, said bed comprising:

a chassis;

a mattress attached to said chassis; and

at least one guide mechanism movably supported by said chassis, said mattress having an undulation formed by routing said mattress through said guide mechanism, said undulation continuously-movable relative to said chassis in concert with said guide mechanism.

20. The bed of claim 19 further comprising a carrier movably mounted on said chassis, said carrier movable relative to said mattress, said guide mechanism attached to said carrier, said mattress supported by said carrier.

21. The bed of claim 20 wherein said guide mechanism comprises a plurality of guides, at least two of said plurality of guides having a continuously-variable gap therebetween, said undulation having a continuously-variable span corresponding to said continuously-variable gap.

22. The bed of claim 21 further comprising dispensing and collecting means for installing at least one first stratum between said mattress and the occupant and for removing at least one second stratum installed between said mattress and the occupant, said dispensing and collecting means attached to said guide mechanism and responsive to the movement of said guide mechanism relative to said chassis, the first and the second strata removably attached to said chassis.

23. The bed of claim 22 wherein, with the weight of the occupant on said mattress, said dispensing and collecting means is capable of installing the first stratum and removing the second stratum substantially without moving the occupant and substantially without frictional movement of the first and the second strata relative to the occupant.

24. The bed of claim 23 further including a monitoring device disposed in said undulation.

25. The bed of claim 24 further including a computer network coupled with said monitoring device.

26. The bed of claim 23 further including a therapeutic device disposed in said undulation.

27. The bed of claim 23 further including a facility disposed in said undulation.

28. The bed of claim 23 further including a sanitation tray disposed in said undulation.

29. The bed of claim 28 further including brushes disposed in said undulation above said sanitation tray.

30. The bed of claim 23 wherein said chassis further includes at least one tilt mechanism.

31. The bed of claim 23 further including an automated control system.

32. The bed of claim 31 further including a computer network coupled to said automated control system.

33. A method of gaining access to and relieving pressure from at least one desired location under an occupant of a surface, said method comprising:

providing an undulation in said surface, said undulation continuously-movable relative to the occupant and having a continuously-variable span;

translating said undulation to said at least one desired location substantially without moving the occupant and substantially without frictional movement of said surface relative to the occupant; and

adjusting said continuously-variable span of said undulation substantially without moving the occupant and substantially without frictional movement of said surface relative to the occupant to provide a space of sufficient size to gain access to said at least one desired location and to relieve pressure therefrom.

34. A method of removing at least one first stratum located between a surface and an occupant whose weight is on the surface and installing at least one second stratum between the occupant and the surface, substantially without moving the occupant and substantially without frictional movement of the first and the second strata relative to the occupant, the method comprising:

providing an undulation in said surface, said undulation continuously-movable relative to the occupant;

translating said undulation relative to the occupant; and

responsive to said translation, collecting said at least one first stratum into said undulation and dispensing said at least one second stratum from said undulation.

36 A method of promoting circulation of blood and tissue fluids of patient resting on a surface, the method comprising:

providing an undulation in said surface, said undulation continuously-movable relative to the patient and having a continuously-variable span;

adjusting said continuously-variable span to be within a specific range;

translating said undulation toward the head of the patient at a first predetermined speed;

adjusting said continuously-variable span to be at the lower limit of said specific range; and

translating said undulation toward the feet of the patient at a second predetermined speed.